

SWBAT: differentiate between transverse and longitudinal waves

Jan 4-7:20 AM

# Welcome!!!

H. Leslie Grebe

SECA Physics  
Wednesday 13 April 2016

- \* Pick up:
  - blue concept sheet
  - worksheet
  - slip of paper (for later)



## Opening Activity:

Read the "Commit and Toss" sheet and pick an answer

----> NO NAMES

Centering

Sep 7-7:04 AM

COMMIT & TOSS (white piece of paper):

Pick a choice on the sheet (circle it / write it)

→ No names ←

Crumple up the paper and toss it into the bucket

WHY MIGHT SOMEONE PICK  
THAT?

Apr 12-7:13 AM

Let's do "The Wave" = THE PULSE  
→ ONE VIBRATION

Vibrations through a medium

<http://www.youtube.com/watch?v=3NxLh-3DdaE>

OBSERVATION:  
VIBRATIONS TRAVEL THROUGH  
A MEDIUM BUT DO NOT  
TAKE THE MEDIUM WITH IT

New terms: transverse and longitudinal

Let's watch a simulation...






<https://phet.colorado.edu/en/simulation/wave-interference>

Apr 14-7:34 AM

## Concept Sheet

~ 7 rows when we're done...

We'll fill in two terms (rows) today.

Concept	Meaning	Sym- bol	Units	Picture
FREQUENCY	HOW MANY PER UNIT OF TIME $\text{FREQ} = \frac{\#}{\text{TIME}}$	f	hertz $\text{Hz} = \frac{1}{\text{sec}}$	$\therefore$ 
TRANSVERSE	WHEN THE MEDIUM VIBRATES <u>ACROSS</u> THE DIRECTION THE WAVE TRAVELS.			
LONGITUDINAL	WHEN THE MEDIUM VIBRATES <u>ALONG</u> THE DIRECTION THE WAVE TRAVELS.			

Feb 18-6:50 AM

Common Misconception: We hear because  
air molecules move from mouth to ear

What evidence do we have that this is  
not how it works?

Slinky:  
Simulator:  
Sound:

OBSERVATION:  
VIBRATIONS TRAVEL THROUGH  
A MEDIUM BUT DO NOT  
TAKE THE MEDIUM WITH IT

- DON'T FEEL A BREEZE
- BREATHING IN NOISES
- CAN'T SMELL BREATH OF EVERYONE  
YOU HEAR

Apr 10-7:14 AM

### Daily 3 Questions

- \* Every day except test/project days
- \* 3 Questions on the topics of the day
- \* Main source of daily points
- \* I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1) When people in a stadium do "the wave" it is

- ☒ A. transverse
- B. longitudinal
- C. a sound wave

2) When the medium vibrates **along** the direction the wave travels, it is called

- A. transverse
- ☒ B. longitudinal
- C. frequency

3) What is one reason we know air molecules don't travel from mouth to ear for us to hear? **NO BREEZE**

**CAN'T SMELL BREATH TO HEAR,**

Apr 12-7:15 AM